

DATE

14 March 1961

TRANSMITTAL SLIP**TO:****TSD/SB****ROOM NO.****BUILDING****REMARKS:**

S 77.4 / 1.

SB
15 March 61**FROM:****TSD/AOB****ROOM NO.****BUILDING****EXTENSION**

SECRET

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MEMORANDUM FOR: Chief, TSD/R&D/Chemical Branch

SUBJECT: Requirement for Hand Crank Generator f/u/w HRT-2

1. One of the more popular types of Homing Radio Beacons in the [] operations is the BN-2 or, under its new nomenclature, the HRT-4. Perhaps the most important reason for this popularity was its versatility, especially when used with the GN-58.

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2. At present, the supply of the above beacon is extremely limited and, when the new HRT-2 beacon becomes available in quantity (estimated to begin in July 1961), it is expected that both the HRT-1 and HRT-4 will be issued to end of stock and not re-ordered. It is intended that the HRT-2 will become the only standard low frequency beacon for airdrops until the more sophisticated equipment, such as transponders and portable type radar all-weather beacons, become available in one and one-half to two years.

3. Unfortunately, the above situation cannot be expected to develop until the HRT-2 can be adapted for use with a hand crank generator. Both the HRT-1 and the HRT-2 are designed for use only with mercury cell batteries. Unfortunately, the disadvantages and the relatively short life of this type power supply restricts and limits its use in many circumstances, especially in winter operations and the [] where vast regions are unmapped, and radio beacons are the one and only method of finding the drop area.

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4. It is, therefore, essential that the HRT-2 be provided with hand crank generators in addition to its other types of power supplies presently available, and for those in the future. A preliminary investigation has revealed that there is no hand crank generator available with the output voltages required, i. e., 15 to 20 VDC drawing up to two amperes, which should be as small and light as possible to facilitate carrying over extremely rugged terrain.

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5. It is anticipated that the arrival of the thermo-electric power supply, which used kerosene, will replace hand crank generators in some situations, however, for extreme portability and the fact that the hand crank generator needs only a man's energy, it provides the most versatile and trustworthy means for providing power for an agent aircraft beacon.


TSD/AOB/Technical Support Section

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